

SEQUENCE LISTING

<110> Roelvink, Petrus W
Kovesdi, Imre
Wickham, Thomas J

<120> ADENOVIRAL CAPSID CONTAINING CHIMERIC PROTEIN IX

<130> 208859

<140> US

<141> 2001-02-09

<150> US 60/181,163

<151> 2000-02-09

<160> 13

<170> PatentIn Ver. 2.1

<210> 1

<211> 144

<212> PRT

<213> Adenovirus

<400> 1

Met Asn Gly Thr Thr Gln Asn Asn Ala Ala Leu Phe Asp Gly Gly Val
1 5 10 15

Phe Ser Pro Tyr Leu Thr Ser Arg Leu Pro Tyr Trp Ala Gly Val Arg
20 25 30

Gln Asn Val Val Gly Ser Thr Val Asp Gly Arg Pro Val Ala Pro Ala
35 40 45

Asn Ser Ser Thr Leu Thr Tyr Ala Thr Ile Gly Pro Ser Pro Leu Asp
50 55 60

Thr Ala Ala Ala Ala Ala Ala Ser Ala Ala Ala Ser Thr Ala Arg Ser
65 70 75 80

Met Ala Ala Asp Phe Ser Phe Tyr Asn His Leu Ala Ser Asn Ala Val
85 90 95

Thr Arg Thr Ala Val Arg Glu Asp Ile Leu Thr Val Met Leu Ala Lys
100 105 110

Leu Glu Thr Leu Thr Ala Gln Leu Glu Glu Leu Ser Gln Lys Val Glu
115 120 125

Glu Leu Ala Asp Ala Thr Thr His Thr Pro Ala Gln Pro Val Thr Gln
130 135 140

<210> 2
 <211> 125
 <212> PRT
 <213> Adenovirus

<400> 2
 Met Ala Glu Glu Gly Arg Ile Tyr Val Pro Tyr Val Thr Ala Arg Leu
 1 5 10 15
 Pro Lys Trp Ser Gly Ser Val Gln Asp Lys Thr Gly Ser Asn Met Leu
 20 25 30
 Gly Gly Val Val Leu Pro Pro Asn Ser Gln Ala His Arg Thr Glu Thr
 35 40 45
 Val Gly Thr Glu Ala Thr Arg Asp Asn Leu His Ala Glu Gly Ala Arg
 50 55 60
 Arg Pro Glu Asp Gln Thr Pro Tyr Met Ile Leu Val Glu Asp Ser Leu
 65 70 75 80
 Gly Gly Leu Lys Arg Arg Met Asp Leu Leu Glu Glu Ser Asn Gln Gln
 85 90 95
 Leu Leu Ala Thr Leu Asn Arg Leu Arg Thr Gly Leu Ala Ala Tyr Val
 100 105 110
 Gln Ala Asn Leu Val Gly Gly Gln Val Asn Pro Phe Val
 115 120 125

<210> 3
 <211> 125
 <212> PRT
 <213> Adenovirus

<400> 3
 Met Ala Glu Glu Gly Arg Ile Tyr Val Pro Tyr Val Thr Ala Arg Leu
 1 5 10 15
 Pro Lys Trp Ser Gly Ser Val Gln Asp Lys Thr Gly Ser Asn Met Leu
 20 25 30
 Gly Gly Val Val Leu Pro Pro Asn Ser Gln Ala His Arg Thr Glu Thr
 35 40 45
 Val Gly Thr Glu Ala Thr Arg Asp Asn Leu His Ala Glu Gly Ala Arg
 50 55 60
 Arg Pro Glu Asp Gln Thr Pro Tyr Met Ile Leu Val Glu Asp Ser Leu
 65 70 75 80
 Gly Gly Leu Lys Arg Arg Met Asp Leu Leu Glu Glu Ser Asn Gln Gln
 85 90 95
 Leu Leu Ala Thr Leu Asn Arg Leu Arg Thr Gly Leu Ala Ala Tyr Val
 100 105 110

Gln Ala Asn Leu Val Gly Gly Gln Val Asn Pro Phe Val
 115 120 125

<210> 4

<211> 140

<212> PRT

<213> Adenovirus

<400> 4

Met Ser Ala Asn Ser Phe Asp Gly Ser Ile Val Ser Ser Tyr Leu Thr
 1 5 10 15

Thr Arg Met Pro Pro Trp Ala Gly Val Arg Gln Asn Val Met Gly Ser
 20 25 30

Ser Ile Asp Gly Arg Pro Val Leu Pro Ala Asn Ser Thr Thr Leu Thr
 35 40 45

Tyr Glu Thr Val Ser Gly Thr Pro Leu Glu Thr Ala Ala Ser Ala Ala
 50 55 60

Ala Ser Ala Ala Ala Ala Thr Ala Arg Gly Ile Val Thr Asp Phe Ala
 65 70 75 80

Phe Leu Ser Pro Leu Ala Ser Ser Ala Ala Ser Arg Ser Ser Ala Arg
 85 90 95

Asp Asp Lys Leu Thr Ala Leu Leu Ala Gln Leu Asp Ser Leu Thr Arg
 100 105 110

Glu Leu Asn Val Val Ser Gln Gln Leu Leu Asp Leu Arg Gln Gln Val
 115 120 125

Ser Ala Leu Lys Ala Ser Ser Pro Pro Asn Ala Val
 130 135 140

<210> 5

<211> 140

<212> PRT

<213> Adenovirus

<400> 5

Met Ser Thr Asn Ser Phe Asp Gly Ser Ile Val Ser Ser Tyr Leu Thr
 1 5 10 15

Thr Arg Met Pro Pro Trp Ala Gly Val Arg Gln Asn Val Met Gly Ser
 20 25 30

Ser Ile Asp Gly Arg Pro Val Leu Pro Ala Asn Ser Thr Thr Leu Thr
 35 40 45

Tyr Glu Thr Val Ser Gly Thr Pro Leu Glu Thr Ala Ala Ser Ala Ala
 50 55 60

Ala Ser Ala Ala Ala Ala Thr Ala Arg Gly Ile Val Thr Asp Phe Ala
 65 70 75 80

Phe Leu Ser Pro Leu Ala Ser Ser Ala Ala Ser Arg Ser Ser Ala Arg
85 90 95

Asp Asp Lys Leu Thr Ala Leu Leu Ala Gln Leu Asp Ser Leu Thr Arg
100 105 110

Glu Leu Asn Val Val Ser Gln Gln Leu Leu Asp Leu Arg Gln Gln Val
115 120 125

Ser Ala Leu Lys Ala Ser Ser Pro Pro Asn Ala Val
130 135 140

<210> 6

<211> 132

<212> PRT

<213> Adenovirus

<400> 6

Met Ser Gly Phe Thr Glu Gly Asn Ala Val Ser Phe Glu Gly Gly Val
1 5 10 15

Phe Ser Pro Tyr Leu Thr Thr Arg Leu Pro Ser Trp Ala Gly Val Arg
20 25 30

Gln Asn Val Val Gly Ser Asn Val Asp Gly Arg Pro Val Ala Pro Ala
35 40 45

Asn Ser Thr Thr Leu Thr Tyr Ala Thr Ile Gly Ser Ser Val Asp Thr
50 55 60

Ala Ala Ala Ala Ala Ala Ser Ala Ala Ala Ser Thr Ala Arg Gly Met
65 70 75 80

Ala Ala Asp Phe Gly Leu Tyr Asn Gln Leu Ala Ala Ser Arg Leu Arg
85 90 95

Glu Glu Asp Ala Leu Ser Val Val Leu Thr Arg Leu Glu Glu Leu Ser
100 105 110

Gln Gln Leu Gln Asp Met Ser Ala Lys Met Ala Leu Leu Asn Pro Pro
115 120 125

Ala Asn Thr Ser
130

<210> 7

<211> 133

<212> PRT

<213> Adenovirus

<400> 7

Met Ser Gly Ser Met Glu Gly Asn Ala Val Ser Phe Lys Gly Gly Val
1 5 10 15

Phe Ser Pro Tyr Leu Thr Thr Arg Leu Pro Ala Trp Ala Gly Val Arg
20 25 30

Gln Asn Val Met Gly Ser Asn Val Asp Gly Arg Pro Val Ala Pro Ala
 35 40 45

Asn Ser Ala Thr Leu Thr Tyr Ala Thr Val Gly Ser Ser Val Asp Thr
 50 55 60

Ala Ala Ala Ala Ala Ala Ser Ala Ala Ala Ser Thr Ala Arg Gly Met
 65 70 75 80

Ala Ala Asp Phe Gly Leu Tyr Asn Gln Leu Ala Ala Ser Arg Ser Leu
 85 90 95

Arg Glu Glu Asp Ala Leu Ser Val Val Leu Thr Arg Met Glu Glu Leu
 100 105 110

Ser Gln Gln Leu Gln Asp Leu Phe Ala Lys Val Ala Leu Leu Asn Pro
 115 120 125

Pro Ala Asn Ala Ser
 130

<210> 8

<211> 130

<212> PRT

<213> Adenovirus

<400> 8

Met Ser Xaa Xaa Xaa Phe Xaa Gly Xaa Ile Xaa Ser Pro Tyr Leu Thr
 1 5 10 15

Thr Arg Leu Pro Xaa Trp Ala Gly Val Arg Gln Asn Val Xaa Gly Ser
 20 25 30

Asn Xaa Asp Gly Arg Pro Val Leu Pro Ala Asn Ser Xaa Thr Leu Thr
 35 40 45

Tyr Glu Thr Val Gly Xaa Xaa Xaa Xaa Thr Ala Ala Ala Ala Ala Ala
 50 55 60

Ser Ala Ala Ala Xaa Thr Ala Arg Gly Xaa Xaa Xaa Asp Phe Xaa Xaa
 65 70 75 80

Xaa Xaa Xaa Leu Ala Xaa Ser Xaa Xaa Xaa Arg Xaa Xaa Xaa Xaa Glu
 85 90 95

Asp Xaa Leu Xaa Xaa Leu Leu Ala Xaa Leu Xaa Xaa Leu Xaa Xaa Xaa
 100 105 110

Leu Xaa Xaa Xaa Ser Gln Xaa Xaa Leu Xaa Xaa Xaa Xaa Pro Xaa Asn
 115 120 125

Xaa Val
 130

<210> 9

<211> 130

<212> PRT

<213> Adenovirus

<400> 9

Met Ser Gly Asn Ser Phe Asp Gly Gly Ile Phe Ser Pro Tyr Leu Thr
1 5 10 15

Thr Arg Leu Pro Lys Trp Ala Gly Val Arg Gln Asn Val Met Gly Ser
20 25 30

Asn Val Asp Gly Arg Pro Val Leu Pro Ala Asn Ser Thr Thr Leu Thr
35 40 45

Tyr Glu Thr Val Gly Gly Ser Leu Asp Thr Ala Ala Ala Ala Ala
50 55 60

Ser Ala Ala Ala Ser Thr Ala Arg Gly Met Ala Ala Asp Phe Gly Phe
65 70 75 80

Tyr Asn Leu Leu Ala Ser Ser Ala Gly Gly Arg Ser Ser Ala Arg Glu
85 90 95

Asp Ala Leu Thr Val Leu Leu Ala Thr Leu Glu Ser Leu Thr Thr Gln
100 105 110

Leu Ala Ala Val Ser Gln Ala Ala Leu Val Gly Gly Ser Pro Pro Asn
115 120 125

Ala Val
130

<210> 10

<211> 498

<212> DNA

<213> Adenovirus

<400> 10

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ggttcgggat ctactagaag caccaactcg tttgatggaa gcattgtgag ctcatatttg 120
acaacgcgca tgcccccatg ggccgggggtg cgtcagaatg tgatgggctc cagcattgat 180
ggtcgccccg tctgccccgc aaactctact accttgacct acgagaccgt gtctggaacg 240
ccggttgaga ctgcagcctc cgcgcgcgtc tcagccgctg cagccaccgc ccgcgggatt 300
gtgactgact ttgctttcct gagcccgcctt gcaagcagtg cagcttcccg ttcattccgc 360
cgcatgaca agttgacggc tcttttgcca caattggatt ctttgaccgc ggaacttaat 420
gtcgtttctc agcagctgtt ggatctgcgc cagcagggtt ctgccctgaa ggcttccctc 480
cctcccaatg cggtttaa 498

<210> 11

<211> 165

<212> PRT

<213> Adenovirus

<400> 11

Met Ser Arg Tyr Pro Tyr Asp Val Pro Asp Tyr Ala Gly Ser Gly Ser
1 5 10 15

Gly Ser Gly Ser Gly Ser Gly Ser Thr Arg Ser Thr Asn Ser Phe Asp
20 25 30

Gly Ser Ile Val Ser Ser Tyr Leu Thr Thr Arg Met Pro Pro Trp Ala
 35 40 45

Gly Val Arg Gln Asn Val Met Gly Ser Ser Ile Asp Gly Arg Pro Val
 50 55 60

Leu Pro Ala Asn Ser Thr Thr Leu Thr Tyr Glu Thr Val Ser Gly Thr
 65 70 75 80

Pro Leu Glu Thr Ala Ala Ser Ala Ala Ala Ser Ala Ala Ala Thr
 85 90 95

Ala Arg Gly Ile Val Thr Asp Phe Ala Phe Leu Ser Pro Leu Ala Ser
 100 105 110

Ser Ala Ala Ser Arg Ser Ser Ala Arg Asp Asp Lys Leu Thr Ala Leu
 115 120 125

Leu Ala Gln Leu Asp Ser Leu Thr Arg Glu Leu Asn Val Val Ser Gln
 130 135 140

Gln Leu Leu Asp Leu Arg Gln Gln Val Ser Ala Leu Lys Ala Ser Ser
 145 150 155 160

Pro Pro Asn Ala Val
 165

<210> 12

<211> 495

<212> DNA

<213> Adenovirus

<400> 12

atgagcacca actcgtttga tggagcatt gtgagctcat atttgacaac gcgcatgccc 60
 ccatggggccg ggggtgcgtca gaatgtgatg ggctccagca ttgatggtcg ccccgctcctg 120
 cccgcaaact ctactacctt gacctacgag accgtgtctg gaacgccggt ggagactgca 180
 gctctcgccg ccgcttcagc cgtgcagcc accgcccgcg ggattgtgac tgactttgct 240
 ttcttgagcc cgtttgcaag cagtgcagct tcccgttcat ccgcccgcga tgacaagttg 300
 acggctcttt tggcacaatt ggattctttg acccggggaac ttaatgtcgt ttctcagcag 360
 ctgttgatc tgcgccagca ggtttctgcc ctgaaggctt cctcccctcc caatgcgggt 420
 tctagtgggt ctggctcagg ctccggttca ggttcgggat cttaccctta cgacgtgccc 480
 gactacgcct ctaga 495

<210> 13

<211> 165

<212> PRT

<213> Adenovirus

<400> 13

Met Ser Thr Asn Ser Phe Asp Gly Ser Ile Val Ser Ser Tyr Leu Thr
 1 5 10 15

Thr Arg Met Pro Pro Trp Ala Gly Val Arg Gln Asn Val Met Gly Ser
 20 25 30

Ser Ile Asp Gly Arg Pro Val Leu Pro Ala Asn Ser Thr Thr Leu Thr
35 40 45

Tyr Glu Thr Val Ser Gly Thr Pro Leu Glu Thr Ala Ala Ser Ala Ala
50 55 60

Ala Ser Ala Ala Ala Ala Thr Ala Arg Gly Ile Val Thr Asp Phe Ala
65 70 75 80

Phe Leu Ser Pro Leu Ala Ser Ser Ala Ala Ser Arg Ser Ser Ala Arg
85 90 95

Asp Asp Lys Leu Thr Ala Leu Leu Ala Gln Leu Asp Ser Leu Thr Arg
100 105 110

Glu Leu Asn Val Val Ser Gln Gln Leu Leu Asp Leu Arg Gln Gln Val
115 120 125

Ser Ala Leu Lys Ala Ser Ser Pro Pro Asn Ala Val Ser Ser Gly Ser
130 135 140

Gly Ser Gly Ser Gly Ser Gly Ser Gly Ser Tyr Pro Tyr Asp Val Pro
145 150 155 160

Asp Tyr Ala Ser Arg
165